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ABSTRACT

The purpose of the project described in this paper was to gather information about online/CD-ROM database systems that would be useful in improving the services offered at the University of Findlay, a small private liberal arts college in northwestern Ohio. A survey was sent to 67 libraries serving colleges similar in size which included questions on: (1) whether the libraries offer online bibliographic services, CD-ROM searching, or both; (2) whether the services are equally available to all groups served by the library; (3) who pays for the services and how the fee is determined; (4) if libraries advertise their search capabilities, how they do so; and (5) where the online search workstation is located. Completed surveys were received from 57 institutions with a student population between 1,000 and 3,000. Most of the respondents offered both online and CD-ROM services. Virtually every library made search services available to both library staff and to faculty. Almost all of the libraries offered their search capacities to undergraduate students. About a third charged no fees for online search services. Of the two-thirds that charged, about half charged on the basis of connect time costs and half charged according to the status of the requester. Ninety percent of the respondents advertised their services through bibliographic instruction, in-library promotion, campus-wide promotion, and other methods. The search workstation is likely to be located in a room by itself, but many terminals are also found in the reference room. Librarians conducted online searches in the great majority of cases while patrons searched CD-ROM databases. Faculty research was the most common reason for conducting a search. Only a quarter of the respondents had a written policy for conducting searches. Nearly half of the respondents conducted fewer than six searches each month. A copy of the survey and cover letter sent to the libraries is appended. (Contains 32 references.) (KRN)

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Online/CD-ROM Bibliographic Database Searching in a Small Academic Library

A Master's Research Paper submitted to the
Kent State University School of Library Science
in partial fulfillment of the requirements
for the degree Master of Library Science

by

Lynn T. Pitet

August 1, 1992

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Online/CD-ROM Bibliographic Database Searching in a Small Academic Library

Abstract: Implementation of an online/CD-ROM bibliographic database system took place almost two years ago at the University of Findlay. However, some grey areas still exist at the organizational level, and input from experienced personnel would help. A questionnaire was designed to pinpoint areas that would benefit from further investigation. The survey was mailed to sixty-seven academic libraries in Indiana, Kentucky, Michigan and Pennsylvania. Four main areas covered in the questionnaire are: 1.) who are the users of the system; 2.) who pays to use the system and how much; 3.) how is the promotion of services handled; and 4.) where is the bibliographic work area located. Results from fifty-seven respondents indicate that faculty and students utilize the services most often. More often than not, the users are charged for the service, and the charges are based on connect time costs as often as they are based on the status of the requester. Promotion of online services is almost universal, and bibliographic instruction is the preferred method of advertising. The online search workstation is likely to be located in a room by itself, but many terminals are also found in the reference room.

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Table of Contents

Introduction.....1

Research Objectives.....3

Literature Review.....5

Methodology.....21

Results.....27

Summary.....32

Questionnaire.....Appendix A

Cover Letter for Sample.....Appendix B

Tables.....Appendix C

Introduction

With the tremendous growth that has taken place in bibliographic database services, more and more answers are being sought to questions that were inconceivable twenty years ago. The question of whether to charge for a search at all has evolved into making decisions about different fee structures, and the options are becoming more and more complicated as some major database suppliers move to change *their* fee structure to accommodate more sophisticated searchers. The more sophisticated searchers specialize in subject areas so that patrons who want a thorough search can be assured that their topic has been covered from every relevant angle. This is progress, and it is wonderful, but it also presents libraries with so many options that it is difficult to know which way of doing things is best.

The University of Findlay is a small, private, liberal arts institution in northwest Ohio with an enrollment of just under 3,000 students. Shafer Library has consistently tried to offer students and faculty the best sources and service possible, and online/CD-ROM bibliographic searching is available at this time. A great deal of planning went into the acquisition of online services, but there are still some grey areas that could stand some clarification. The literature is helpful, but it is often difficult to know what size institution is being surveyed, and

search services will vary depending on the size of enrollment and the number of faculty members. In order to profit from the experiences of other libraries that offer bibliographic searching, this author designed a questionnaire that would answer some questions of interest to Shafer Library's staff.

Research Objectives

A great deal of thought and a thorough review of circumstances went into Shafer Library's plan to make available online and CD-ROM bibliographic services, but there are some areas that warrant additional attention. Surveying area libraries that have likely been faced with similar problems would help Shafer Library's staff profit from others' triumphs and disasters. The following areas were investigated in the survey:

1. Do libraries offer online bibliographic services, CD-ROM searching, or both? With the immense popularity of CD-ROMs, libraries in this size category may well elect to limit their search capabilities to the literature covered by CD-ROM products.

2. To whom are the library's services offered? Libraries may have lists of specific staff and faculty members who are allowed to use the online services. These services may be available to students and community members as well. If there are restrictions for some of these groups, it would be worthwhile to know the reasoning behind them.

3. Who pays for the services, and how is the fee, if any, determined? A clear and concise written policy on charges for database searching services is desirable, and there are many ways this policy can be established. Pricing will undoubtedly be

different for online searching and for CD-ROM searching.

4. How do libraries advertise their search capabilities? Some schools may prefer to keep this valuable asset quiet, while some are eager to impress others with their expertise. The presence or absence of a promotional campaign, and the method and degree to which it is done, could be a reflection of the personnel authorized to use the system and of the fee schedule.

5. How would libraries surveyed describe the physical location of the bibliographic database workstation? Even though Shafer Library's online workstation is in place, opinion varies as to the wisdom of its placement. Libraries who have been working with their systems may have formed an opinion as to the optimum placement.

Literature Review

A review of the recent literature revealed a number of studies addressing one or two of the topics of interest to this author. In 1983, a survey of thirty-six public and private academic libraries in Louisiana contained questions about the make-up of the patron group using their online services.[1] Only nineteen of the libraries had online search capabilities at that time, but those nineteen indicated that the services were available to faculty and staff, graduate and undergraduate students, and administrators, as well as community patrons. The majority of the searches were performed for faculty, with graduate students next, and undergraduate students and administrators next. However, 84% said that they did accept search requests from patrons not affiliated with the college or university, while only 16% did not.

This same Louisiana survey included questions about the fees charged by libraries for their online services. In 50% of the cases, the user was charged the full cost of the search. Of this group, 40% were also asked to pay telecommunications charges. One fourth of all libraries responding charged a flat fee to any user, and 15% of respondents individualized their fee structure, with the library picking up part of the cost of the search and the patron paying the difference. Only one library (5%) of the

nineteen responding paid all search costs. Questions about publicizing computer searches were included on the survey as well. Sixteen libraries (84%) advertised their computer search services, while only three did not. One library chose not to advertise because they already had more business than they could handle. Another said that the service was advertised when first initiated, but not any more. Promotional methods mentioned were library tours, library newsletters, student newspapers, displays, posters, brochures, class demonstrations, and oral communication. Of these, library tours and newsletters were mentioned most often.

Both online searching and CD-ROM searching were investigated in a 1990 survey of academic libraries in Illinois.[2] Twenty-six private colleges with enrollments under 3,000 students reported nineteen different options for charging online fees. Faculty searches were funded by 37% of the libraries, and student searches were funded by 20%. Many schools reported that it was less expensive to encourage online access than to maintain a standing order of some reference tools in print.

In 1990, Eric Celeste made a survey of Ohio's public libraries to determine the use of automated services in the reference departments.[3] While the patron population in a public library setting cannot be as neatly divided into distinct groups as in an academic setting, some responses in the Celeste study reflect the general mood in all libraries. For instance, the restrictions on who is able to search depend on the type of

automation being discussed. In the case of CD-ROM services, 95% of the libraries responding indicated that patrons were allowed to search without intermediaries. For online systems, however, only 6% of the libraries allowed searches to be conducted without staff intervention. The question of how much to charge is also reflective of the general mood in academic libraries. Almost two-thirds of the public libraries in the Celeste study have some kind of fee structure for online searches, while none of the libraries charge for CD-ROM searching. Those libraries who do charge for online searches again employ many different criteria to come up with their policies. All but one library indicated that they allow the patron some amount of free searching.

In 1980, Nazareth College of Rochester initiated their online services using the DIALOG system.[4] This small, liberal arts college felt that online searching was feasible and desirable, with sizeable graduate programs in education and speech pathology, and with the knowledge that searching databases for students who lacked sufficient print resources would be cost effective. Fortunately, a follow up article was published "ten years and 20,000 searches later", and the results are enlightening in view of this author's survey.[5]

As reported in the original article, the search service was heavily promoted from the beginning. Posters, flyers, memos to faculty inviting them to "share a lunch and an online search", and personal contact were all used as promotional strategies. The personal contact proved to be very important in the success

of the project. In order to promote the new service, the first fifty searches were done free of charge. Since this initial offering took place in the summer when very few undergraduate courses were offered, the first searches were done for graduate students and for faculty. A total of sixty-four searches were completed during the summer term in 1980. Sixteen of the sixty-four patrons returned questionnaires that were handed out when their search was complete, and all sixteen reported that they would be willing to pay for this service in the future. In Fall 1980, Nazareth College began to charge for searches. The library's pricing policy had four different categories, but all four categories entailed some charge. Students split the cost of the search 50/50 with the library, with the maximum charge to the student not to exceed $5.00 per search. In addition, the student was responsible for the full cost of offline printing, and the searcher had the right to limit the number of searches printed online. Students majoring in science were allowed free searching for classroom related projects since the school did not subscribe to print indexes or abstracts in this area. Questionnaires collected at the end of the semester indicated that the price structure was fair and that the students would use this method of searching again. At the end of the first full year of online implementation, the authors were hopeful that online searching would be considered by the majority of the students in the future.

The librarians at Nazareth College spent the next ten years

improving their online search product with a resulting increase in search requests each year. Major improvements were made over the years in the way the search system was marketed. Annotating the printouts with the library's holdings highlighted was the first step, but the introduction of a laser printer in 1988 had an unexpected impact on searching. "Suddenly, even longtime users were making comments about the value of the service and the expertise of the searches."[6] Nothing at the reference desk had changed; the quality product that was being produced now *looked* like a high quality product.

During the 1988-1989 school year, fees for searches were dropped entirely and there was a sharp increase in search requests that year. However, the authors felt that the increase in activity was underway before the decrease in price became effective. Throughout the ten years, several different fee structures were implemented, but the introduction of CD-ROM units in 1989 provided the impetus to abolish online fees entirely. The librarians felt that offering free computer-based searching via CD-ROMs for areas in which they held sufficient print resources, while still charging for online searches, would be inequitable.

Changes in the location of the online work area affected the quantity and quality of the searches over the ten year period, too. Initially, searching was performed by appointment only in a room separate from the reference area. With the addition of another search station at the reference desk, the first area was

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soon deserted and dismantled. Not only did the number of searches increase, but the reference librarians soon felt that online searching was a major part of their job responsibilities, rather than a task that had been added on to their regular reference duties. Subject specialization was possible, with a resulting decrease in cost per search. A side-effect of the move to the reference desk was a general increase in reference activity. The authors felt that this increase may, in part, have been due to a change in the way the librarians were perceived. According to Smith and Smith, "..it does seem reasonable that the professional image of the reference librarian was enhanced by the public display of technical and problem-solving abilities demonstrated by the online searching performed at the reference desk in the middle of the library."[7]

Four aspects of bibliographic database searching were investigated in this author's survey. Of these four, two aspects have been covered in the literature more than others. The question of who will be allowed to use the technology has been discussed in almost every article dealing with online searching in academic libraries. Surprisingly, online searching in academic libraries does not seem to be limited to any particular group or groups. This author expected to find a number of schools who might choose to limit online searching to faculty and graduate students, in other words, to those engaged in serious research. This was not the case. Not surprisingly, there exist no restrictions as to access to CD-ROM systems either. The

factor that does have the potential to limit access, however, is the pricing of online services. This one aspect of online searching has received perhaps the most attention in the literature, and it continues to be a hot topic some twenty years after the technology was introduced.

In the beginning, as now, the basic question is whether or not to charge for a search at all. After all, "the purpose of the traditional American library is to select, preserve and organize the records of human achievement which collectively represent society's public knowledge."[8] The library and its services and its product have always been seen as public goods. For years, librarians have walked students and faculty through laborious manual searches yielding a wealth of information on the topic at hand. Is it fair to charge the patron for that same information just because it can now be produced in a matter of minutes instead of hours?[9]

For some, this debate depends on the role that online database searching assumes within the existing reference department. James Cogswell believes that fees are necessary because online searching is an additional cost to the library; it does not replace a service or a reference tool.[10] Some libraries *do* replace reference tools, however; the staff may decide not to continue with a particular print index that only a few students use, when these students are given the option of using an online system for their research. This use of online reference work can be very cost-effective. A small number of searches, even on an

expensive science database, would be far less expensive than maintaining that same index as a standing order in print. The library at California State College in Stanislaus, however, assumes all costs of computerized searching. The philosophy is the same as Cogswell's in that they do not consider computerized searching a "specialized service or a duplication of existing resources but rather an additional reference tool appropriate to certain occasions."[11] The same attitude toward online searching, then, has lead two different schools to use two different fee structures.

For others, the debate is purely dollars and cents, and what can we offer students so that they receive the best information available within the budgetary restraints of the institution. Most often, this means that patrons have to pay for the services they request. Online database searching was an expensive proposition twenty years ago and it is still an expensive proposition. In 1983, a survey of academic libraries found that 73% charged a fee for faculty and student searches. A 1981 American Library Association survey found that 68% of two and four year colleges and 93% of universities surveyed assessed fees.[12] Academic libraries in the United Kingdom were equally divided between fee and free in a 1979 survey.[13] But the 50% represented a 20% increase over two years in those libraries that charged for online searches; Foster and Akeroyd saw this as a general tendency toward greater cost recovery for services as budget pressures increase. And Breen notes that "the percentage

of libraries charging a fee increases as the length of time increases; that is, the longer a library has been offering online searching, the more likely it is to charge a fee."[14] Many libraries began their use of online bibliographic databases with grant money. When the funds from these start-up grants were depleted, libraries found it necessary to begin to recover at least some of the charges for services that their patrons took for granted. And more often than not, libraries that charge for their online services set up fee structures that vary tremendously from school to school.

The 1981 ALA survey determined that 60% of academic libraries distinguished between two or three different classes of search requesters and varied their fees accordingly. The U.K. survey noted that differential charges are common in academic libraries, but that care must be taken to carefully define the user groups to avoid any contention. At the time of the U.K. survey, online searching there was limited to faculty and graduate students, and was seen as inappropriate for undergraduates. Certainly at the outset, online bibliographic searching was limited to faculty requests; graduate students were given the privilege of using the new technology next. In recent years, however, undergraduates have joined the ranks of search requesters in force. Not one article in the literature reviewed by this author restricted undergraduates from the search group. The only factor that might account for lower numbers of undergraduates requesting searches is the inability to pay the

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fees. This fact was the reason for an experiment at Evans Library on the campus of Texas A&M University.[15] Here, undergraduates made up only 8% of the search requesters, choosing to avoid the service primarily because of cost. In their 1983 project, Jane Dodd and Vicki Anders made free online searches available to undergraduates in a technical writing class. Surprisingly, the majority of the students responding to a follow up questionnaire felt that, in the future, students should be expected to pay the entire amount of a search so that the library could use that money elsewhere. Many others said that a flat fee of $10.00 was reasonable if they could expect desirable results from the search.

Membership in a particular user group is not the only means by which a library can vary search charges. Fee structures for online bibliographic services can vary according to what part or parts of the service are subsidized by the library. The twenty-four respondents in Selbert's questionnaire came up with nineteen different ways to charge for online searching. In the United Kingdom, many schools offer free online searching at first, and institute charges later. Matzek and Smith enticed students to try their new technology in 1979 by offering fifty free searches. In the second year of their program, fees were based on membership in a user group, where faculty was the only group to search free of charge. Students were assessed 50% of the direct charge of the search with a maximum of $5.00 per search. But student fees were further regulated by varying the charges for

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printing citations either online or offline. In fact, libraries that have philosophical problems with fee based searching, but that cannot financially survive by offering free online services, sometimes subsidize the service by charging for printing the hits, either online, offline or both. Other innovative fee schedules are described in the Texas A&M library project. One option was a 5-5-5 scheme: the library pays the first $5.00, the user pays the second $5.00, the library pays the third $5.00, and the user pays any additional fee.[16]

Fee structure will continue to be a topic over which library directors agonize for quite some time. Some schools favor charging because it has a tendency to make searching more efficient. Some report that their search requestors are comfortable paying because it legitimizes the process. Apparently, no one is quite sure that what they get for free is really worth having. And one school admitted that they imposed a fee in order to keep the growth of the service down.[17]

Worry over the growth of the service was mentioned many times in articles reviewed by this author. Many librarians felt that their workload had already reached a critical stage, and budget tightening on campuses nationwide makes the addition of personnel in libraries unlikely. Can librarians effectively take on additional duties at the online search terminal and continue to perform other professional duties as well? Some libraries are hesitant to advertise for fear the staff will be inundated with requests. A survey undertaken at the University of California at

Santa Barbara investigated the impact of promotion of online services on library operations.[18] The authors were afraid that a change from their low-keyed marketing techniques to a full-scaled promotion might adversely affect other library business. They reported that promotion in their library, and in those libraries responding to the questionnaire, resulted in increased online activity, but that all respondents were able to handle the increase. Reluctance to go full force into an advertising campaign is evident in the U.K. as well. Particularly in libraries that operate a free search service, problems over supply and demand can put a damper on any promotional efforts aimed at online searching. However, Foster and Akeroyd feel that an effort at marketing a search system in a library that charges for use of the system can provide useful income.[19]

Successful marketing is the key to providing a promotional package that fits the capabilities of the library with the services it has to offer. In order to market a product, one must first identify the users in order to inform them of the product's existence, and second, convince the users that they need the product. Identifying the group of potential users for online products in academic settings is relatively easy. The users are faculty members, graduate and undergraduate students, administrators, and community clientele, who the library may or may not wish to cultivate. The problem, then, is tailoring the promotional campaign to entice the specific interest groups. Each group needs something different. In his article on

marketing services for the university, Douglas Ferguson quotes Theodore Levitt as saying, "Last year 1 million quarter-inch drills were sold, not because people wanted quarter-inch drills but because they wanted quarter-inch holes."[20] Give the people what they want, and in the academic library, each group will want something different. For undergraduates, the prospect of saving time is a powerful draw. For graduate students and faculty doing research, knowing that an effective review of relevant resources has been made is worth the price of any search.

Having identified the precise groups to target in a promotion, make the potential users feel that they cannot live without the product. Searchers know that the appeal of online databases is their ability to answer questions with great speed. Tell the undergraduate students, who are perpetually up against deadlines, that the online system can knock hours off their research time. Online searching offers accessibility that is unmatched for the graduate student or faculty member trying to exhaust the literature on a topic of research.

The method the library uses to get the right messages across to the right people can take many different forms. In his article on undergraduate searching, William Maina asked students how they learned about the free searches they were offering. The most effective means of publicizing something on the San Diego campus was a flood of posters. Twenty-six percent of the total students answering this question learned about the free search offering through posters or fact sheets that appeared on bulletin

boards and were distributed throughout the campus buildings. The second most effective method of promotion was word-of-mouth. Reference librarians who taught bibliographic instruction classes mentioned the free search opportunity, and students who had already taken advantage of the service also spread the word. The least effective method of promotion was faculty involvement. Letters were sent to faculty members who were specifically asked to mention the service to their students. Only 1% of the students said that they learned of the search this way.[21] According to Antonoy and Graziano, word-of-mouth was the *most* effective method of promotion at UCSB. Thirty-five students mentioned that they learned of UCSB's search service from another person, but the authors caution against relying too heavily on this method of promotion. The people who will eventually spread the word about the wonders of online database searching must first be attracted to the service by some other promotional method. Advertising produces immediate results; word-of-mouth accounts for much of the steady flow of requests that follow.[22]

The users who promote the system by word-of-mouth will do so because the product provided a superior service to them. According to Patricia K. Smith, "Product performance is what leads to repeat sales. Essentially on a repeat sale, the product itself has become the promoter."[23] This means that the printout which accompanies the search should enhance the product too. A well-designed printout can help promote the search service, as Smith and Smith noted in their January, 1991 follow-up article in

Online. The librarians at Nazareth College made a practice of annotating online and offline printouts so that patrons knew which cited items were held in Nazareth's collection. The addition of a laser printer for the online workstation, however, improved their product and its perceived value for the patron.[24] Marketing the online search system can be important, even though academic libraries are non-profit institutions. And marketing the system includes, not only the actual advertising, but the packaging of the product as well.

The fourth topic addressed in this author's survey was the location of the online service desk. The literature dealing with location is scarce, and often it is given just a brief mention in an article. Kathleen Voigt visited forty-four libraries in Ohio, Michigan and Indiana, in an effort to compare reference departments. One point of comparison was online services. She found that most libraries considered online searching to be an extension of the reference department and, as such, offered it in the same location as the reference desk.[25] Again, the question seems to be one of philosophy. If database searching is seen as an elite service available to a select few who are willing and able to pay for the product, the workstation could appropriately be placed in a remote, secluded location. If, however, the library staff looks upon an online search as merely an extension of conventional reference work, the workstation belongs out in the open. Barbara Quint offers this suggestion, 'Bring that online terminal out from behind that pillar! Unlock the library

middle manager's door and drag the modem-ed micro out where it can do your patrons some good---to the reference desk."[26]

With a considerable amount of literature relating to fee structures, and a somewhat smaller amount of literature to draw from concerning promotional campaigns and location of online terminals, it is difficult to see a trend. It would be unusual for a small academic institution to charge as much for a complicated online search as a large university. It would also be unusual for a small college or university to promote its online capabilities in the same way as a large university would. This author's survey tried to ascertain the policies adopted and judgements made by schools with enrollments similar in size to The University of Findlay in hopes that the information would prove useful.

Methodology

In order to determine how some libraries administer their online and CD-ROM searching capabilities, a survey was mailed to institutions similar in size to The University of Findlay. Student undergraduate enrollment was used as the primary determination for inclusion, rather than library size based on the number of volumes and periodical subscriptions. It is, after all, the population of an academic institution that bibliographic services benefit, and the questions that this author wanted answered had more to do with end users than with volumes contained in the library.

The Sample

The University of Findlay had a student population of 2985 during the 1991-1992 academic year. It was decided to include schools with an enrollment of between 1,000 and 3,000 students when selecting the sample population. Five schools listed their enrollments as being greater than 3,000 when the surveys were returned, but the decision was made to include their data in the total.

Other factors were also considered when the determination was being made to include or exclude schools. Because the

frequency of online searching might vary greatly depending on the curriculum, only schools that offered liberal arts degrees were considered for the sample. These colleges and universities offered primarily BA and BS degrees. And because public and academic libraries in Ohio have been inundated with surveys from Kent State University's library and information science students, it was decided to draw the sample from four states surrounding Ohio, namely Indiana, Michigan, Pennsylvania, and Kentucky.

Questionnaire Development

A questionnaire was developed to investigate four aspects of online services: 1.) who are the users; 2.) who pays for the services and how much; 3.) how is the promotion of services handled; and 4.) where is the bibliographic work area located? (Appendix A). The questionnaire began with a question about the approximate size of the student population, and it ended by inviting the recipient to enter their name and address if they wished to receive a copy of the survey results. The questionnaire was kept short and made easy to follow in order to reduce non-response bias.

The questionnaire had essentially two sections to it. One section dealt with online bibliographic searching, and the other section dealt with CD-ROM searching. These sections contained identical questions; respondents whose library did not perform online searching could proceed directly to number seventeen and

answer the questions pertaining to CD-ROM searching. Although this author was interested primarily in online searching, the use of branching allowed for responses from libraries using either online services or CD-ROM services or both. There was also a general question about written policy statements, and respondents were asked to estimate the number of online searches their library performed in a month.

Procedures and Design

The University of Findlay is a small, private, liberal arts university offering a variety of major courses of study. Two unusual undergraduate programs, equestrian studies and hazardous materials management, have helped The University gain some amount of notoriety, and the graduate program in bilingual education has attracted students from all over Ohio and from many surrounding states. The 1992 summer semester saw the beginning of the graduate program in education, and courses for a master's degree in business administration will be offered in January, 1993.

Shafer library, on the campus of The University of Findlay, has tried to keep a step ahead of the growth going on elsewhere on campus. The staff has always tried to offer patrons the best electronic retrieval equipment to support the curriculum. A long time user of Infotrac, Shafer recently converted to UMI's CD/ROM product, ProQuest, which includes Periodical Abstracts, ABI/Inform, and Business Dateline, a full text database covering

local newspapers. Because Shafer is a partial government depository, the staff uses Silver Platter's Monthly Catalog on CD/ROM. And the library has also acquired the ERIC database on CD/ROM from Silver Platter to supplement other education sources for students enrolled in the new master's program.

Online bibliographic searching with Lockheed's DIALOG has been available in Shafer Library since the summer of 1990. To date, only about six searches have been done. However, with increasing enrollment projected in undergraduate programs, and with the increase in graduate programs offered, the library staff should be prepared for heightened activity at the online search station. It seemed appropriate to investigate past experiences of academic libraries whose search history might have allowed them more practice and, therefore, earned them more expertise.

It was decided that the questionnaire format would serve as the best vehicle for retrieving answers to a few questions of interest. The questionnaire was designed to allow respondents to mark more than one category, when applicable, by inserting the phrase "Check all that apply" after most of the questions. There was also space to comment on each question if respondents wished to be more specific. Directional commands were used to make the questionnaire as easy to follow as possible, and it was kept as brief in order to encourage responding. The final two items invited questions or comments by respondents and asked that they enter their name and address if they wished to receive results of the survey.

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The cover letter that accompanied each questionnaire explained the purpose of the survey, assured respondents of confidentiality, and reinforced the brevity of the survey (Appendix B). The cover letter also mentioned that interested respondents could complete the last item on the questionnaire to receive a summary of the results in the mail.

The sample population was drawn from four states surrounding Ohio, namely Indiana, Michigan, Pennsylvania, and Kentucky, by consulting The Right College.[27] Each college or university listed in the section for these four states was examined and chosen on the basis of curriculum and size of student population. Schools offering a liberal arts degree with a student population between 1,000 and 3,000 were included in the sample (Table 1). The total number of schools in the sample was sixty-seven. After the schools had been selected, a contact person for each of the schools in the sample was determined by consulting the American Library Directory.[28] The contact person was the head of the reference department, or the director of the library if the head of reference was not mentioned. The name and address of the college or university library were also recorded and all of this information was entered into a database. The database was used to tally data and to make mailing labels.

Each database entry was numbered, and corresponding numbers were placed in the upper left corner of each questionnaire. Identification of respondents was necessary for several reasons. The original plan was to send a second wave of questionnaires to

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those who did not respond to the first mailing, and the numbering system would help identify the group who would be contacted a second time. Also, numbering the questionnaires allowed for comparison of responses between states. The database was then used to print mailing labels for each school in the sample, and sixty-seven mailing labels with the author's home address were also printed. These labels were placed on stamped envelopes that were included with the cover letter and questionnaire.

As the questionnaires were returned, the responses were tallied on a master copy. Two months following the first mailing of the sixty-seven questionnaires, fifty-six participants, or 83.5% of the total first mailing, had responded. Because the response rate was so great, it was decided to forego the second wave of mailing. One additional questionnaire was returned much later, but in time for the final tally of results, and this brought the response rate to 85%.

Results

In spite of the fact that automated reference services remain expensive, virtually every library in the sample had access to either online databases or CD-ROM services. Surprisingly, fewer libraries have taken advantage of the CD-ROM format than expected. Only 89% of responding libraries offer CD-ROM services, while 96% of the respondents offer online searching. Those libraries without CD-ROM services all commented that they hope to have that option available soon. Virtually every library offering either online or CD-ROM searching or both, made those services available to both library staff and to faculty (Table 2). Likewise, 98% of the libraries offered their search capabilities to undergraduate students. Only about three-fourths of the libraries reported allowing their graduate students to search online or with CD-ROMs, but it is not known how many of these schools actually had graduate programs. From reviewing the literature, it is well documented that graduate students have access to automated information retrieval even before undergraduate students, so one can assume that nearly 100% of colleges and universities with graduate students would allow them to take advantage of the most sophisticated search capabilities available. It is interesting to learn that fewer than 50% of libraries with online searching allow community

members to use their search facilities, while 88% allow community patrons, or anyone else for that matter, to search with CD-ROM units. Other patrons who are permitted to utilize online bibliographic search services are alumni, administration, university staff, family members of staff, faculty and administration, members of the business and industrial community, and other serious researchers.

As is evident in the literature that dates from the earliest use of online databases to the present, the question of who to charge and how much is a hot topic. The fact that there are so many options for libraries that have decided to charge makes the game even more interesting (Table 3). Not one of the libraries with online search services simply decided to charge a flat fee for anyone using their technology. Thirty-one percent charged no fee at all. The remainder of the libraries responded with a variety of methods to allow them to collect all or part of the charges made by the database vendor and the telecommunications operator.

Respondents in the survey were equally divided between fees dependent on connect time costs and fees dependent on the status of the requester. This questionnaire did not allow respondents to mark specific subsets within the two above categories, but there were several responses in the "other" category. One library allowed free searching until the budget set aside for online searching had been depleted. After that, charges were made to all searchers. Four respondents specifically indicated

that college personnel searched free and that people from the community were charged the cost of the search plus a search fee. As expected, there was no charge for CD-ROM services in any of the responding libraries.

Responses to the question of advertising online search capabilities presented no surprises (Table 4). Fewer than 10% reported that no promotion was done. Bibliographic instruction was the method used most often by respondents (44 respondents), with in-library promotion next (20 respondents) and campus-wide promotion next (15 respondents). Other methods of promotion included contact with faculty, newsletters and handouts. CD-ROM services followed the same pattern for advertising. All but four of the schools responding indicated that CD-ROM database searching was promoted through bibliographic instruction. Twenty-three respondents used in-library promotional materials, and 17 libraries advertised their CD-ROM services campus-wide.

In response to the question concerning location of the bibliographic work area, 65% indicated that the search terminal was in a room by itself (Table 5). Apparently, Barbara Quint's advice has not been well taken in these small, midwestern schools.[29] Many respondents mentioned specific rooms where search workstations were kept, such as the reference librarian's office, the director's office, or the periodicals' office. Twenty percent of the libraries responding do place the online workstation in an open area of the reference department, and another 11% keep the terminal in a secluded section of the

reference department. A few libraries place the online search terminal near the CD-ROM terminals, a few are located in the technical services area, and one library has its online terminal in the computer lab. CD-ROM stations, on the other hand, are consistently out in the open; eighty-two percent of the CD-ROM terminals are located in an open space in the reference room. One library indicated that the CD-ROM workstation was adjacent to the circulation desk, and one mentioned that CD-ROM searching could be done from any terminal in the LAN.

In addition to the four main topics investigated in this author's study, four other questions were included in the questionnaire. Responses to three of the four questions were not surprising. As expected, librarians conducted the great majority of the online database searches (95%) and patrons search unassisted in the majority of CD-ROM searches (96%). Faculty research was the most common reason for requesting a search, followed closely by student research. And finally, as expected, only 23.5% of the respondents have a written policy that pertains specifically to database searching, either online or CD-ROM. This finding was consistent with Kathleen Voigt's discovery, although Voigt's library at the University of Toledo includes policies and procedures of online searching in the manual where the library's purpose, goals and mission are described.[30] Responses to the fourth question were surprising, but were consistent with this author's experience. When asked to estimate the number of online searches done each month, the most common

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response was 4-5 (14 responses). Twelve additional schools reported that they performed fewer than 4 searches per month. Only 5 libraries (9%) complete more than 25 searches in a month. This author expected to find that schools of this size would be performing online searches much more frequently than this, given the fact that almost 97% of the libraries this size are capable of online searching.

Summary

That online bibliographic database searching is available in small academic libraries is a well documented fact, and this author's survey has confirmed the literature. Results of the study indicate that faculty and students, undergraduate and graduate, utilize the service most often. More often than not, the users are charged for the service, and the charges are based on connect time costs as often as they are based on the status of the requester. Promotion of online services is almost universal, and bibliographic instruction is the preferred method of advertising. The online search workstation is likely to be located in a room by itself, but many terminals are also found in the reference room.

The number of online searches being performed in the four states surveyed is surprising low. Of the fifty-five respondents, twenty-six (47%) indicated that fewer than six searches per month are performed. Though the number is consistent with this author's experience, it is a surprise. Librarians who have gained expertise in online searching must be doing their work in large academic institutions, where the demand is greater and it is not as long between searches.

The future of online database searching seems secure, although the face of the searcher may change, and the fee

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structure will almost certainly change. The 90's are the age of the end-users, and the face of the person at the terminal will be that of the researcher rather than the librarian.[31] Of course, this is already true for CD-ROM searching, where the serious researcher can do most of the bibliographic work using a CD-ROM product for older citations and online searching for only the most recent information. However, with the growing use of BRS/After Dark, Knowledge Index, and OCLC's FirstSearch, even the updated information can be obtained by the end-user. Fortunately for librarians, not all searchers intend to become end-users. In 1987, the Business Administration/Social Sciences Reference Department at the University of North Carolina began offering updated search capabilities, including access to BRS/After Dark and various other new CD-ROM products.[32] In spite of these new products, 11% of the 850 patrons who used the service in the first six months requested mediated searches. In a questionnaire distributed from September, 1987 through May, 1988, patrons requesting mediated searches were asked why they selected this kind of search. The results are encouraging for the profession. "The desire to have the search expertise of a librarian was the single most frequently cited reason for requesting a mediated search (68.1%)."[33] Interestingly, this was the most frequently cited response for all user groups, which included graduate students, faculty, undergraduates, staff, and other. Cornick goes on to say, "Even in the face of the growing popularity of searching databases on compact disks or do-it-yourself online

searching, the intermediary will continue to provide an important and necessary service to a diverse segment of the university clientele who recognize the value of their own time and the importance of the searcher's expertise."[34] In his article, "Databases of the Nineties: The Age of Access", Mike O'Leary finds the prospect of increased end-user searching challenging for online specialists. O'Leary believes that end-users will take over the mundane searching, leaving the experienced librarian to perform more complicated searches and to act as a consultant.[35]

In addition to the change of the role of the searcher, there will almost certainly be a change in the fee structure of search services. Academic libraries will continue to charge for their services, but products such as OCLC's FirstSearch may uncomplicate the issue of how much to charge which patron. FirstSearch charges are made in blocks of searches instead of in minutes of connect time, as for most online vendors such as DIALOG. A library purchases a number of search blocks; card blocks allow libraries to distribute the searches in groups of 10 or 25 at a time, and the library decides whether or not to charge for the cards. This system has advantages for small academic libraries like Shafer. As this author's survey has shown, demand for online searching is not great in many small libraries, and searchers may not have the opportunity to practice their skills as often as they would like. Performing a search when the online clock is not ticking has its advantages. Without the time

pressure, less experienced searchers can still deliver a superior product. Innovations such as FirstSearch will continue to improve the services offered to patrons in the small academic library.

Appendix A

ONLINE / CD-ROM BIBLIOGRAPHIC DATABASE SURVEY for ACADEMIC LIBRARIES

This is a brief, but important, survey of some areas of interest to the staff of Shafer Library at the University of Findlay. It is important that you respond even if your library does not offer either online or CD-ROM services. If you are interested in the results of this survey, please complete the last section of the questionnaire, and we will be happy to send you a copy of the final report. When you have finished the survey, please return it in the envelope provided. Thank you for your cooperation.

1. What is the approximate total student population at your college or university?_____

2. Does your library offer online bibliographic searching of databases (e.g. Dialog, BRS)?
   _____yes _____no----------> *go to #10*

3. To whom are these services available? (*Check all that apply.*)
   _____library staff _____undergraduate students
   _____faculty _____graduate students
   _____community members _____other (*please specify*)_____

4. Does your library charge for online searches? (*Check all that apply.*)
   _____yes, a flat fee for everyone
   _____yes, a fee for everyone dependent on connect time costs
   _____yes, a fee dependent on the status of the requester (faculty, student etc.)
   _____no fee for anyone
   _____other (*please specify*)_____

5. Who conducts the online searches? (*Check all that apply.*)
   _____librarians trained in search techniques
   _____patrons, with assistance from librarian
   _____patrons search unassisted
   _____other (*please specify*)_____

6. Do you advertise your online search capabilities? (*Check all that apply.*)
   _____yes, with promotional material in the library
   _____yes, with promotional material campus-wide
   _____yes, with an advertising campaign community-wide
   _____yes, through bibliographic instruction
   _____no promotion is done
   _____other (*please specify*)_____

7. Where is the online bibliographic work area located?
   _____in an open space in the reference area
   _____in a secluded space in the reference area
   _____near other electronic retrieval services (Infotrac, ProQuest, Newsbank)
   _____in a room by itself
   _____other (*please specify*)_____

go to #8---------->

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8. Please estimate the number of online searches done each month._____

9. In a brief statement, what would you say is the <u>most common</u> reason for requesting an online search? (Examples. faculty research for published article or advanced degree; student research for class or for honors program.)_____

10. Does your library offer CD-ROM searching of bibliographic databases?

_____yes _____no---------->go to #17

11. To whom are these services available? (*Check all that apply.*)

_____library staff
_____faculty
_____community members
_____undergraduate students
_____graduate students
_____other (*please specify*)_____

12. Does your library charge for CD-ROM services? (*Check all tha apply.*)

_____yes, a flat fee for everyone
_____yes, a fee dependent on elapsed time of search
_____yes, a fee dependent on the status of the requester (faculty, student etc.)
_____no fee for anyone
_____other (*please specify*)_____

13. Who conducts the CD-ROM searches? (*Check all that apply.*)

_____librarians trained in search techniques
_____patrons, with assistance from librarian
_____patrons search unassisted
_____other (*please specify*)_____

14. Do you advertise your CD-ROM search capabilities? (*Check all that apply.*)

_____yes, with promotional material in the library
_____yes, with promotional material campus-wide
_____yes, with an advertising campaign community-wide
_____yes, through bibliographic instruction
_____no promotion is done
_____other (*please specify*)_____

15. Where is the CD-ROM bibliographic work area located?

_____in an open space in the reference area
_____in a secluded space in the reference area
_____near other electronic retrieval services (Infotrac, ProQuest, Newsbank)
_____in a room by itself
_____other (*please specify*)_____

16. Do you have a written policy that pertains specifically to online/CD-ROM databases?

_____yes _____no

17. If you have neither online nor CD-ROM database searching in your library, are you planning to add this feature within the next year?_____

go to #18---------->

18. If you have any comments or observations that you would like to express, we welcome them.

_____
_____
_____
_____
_____

19 If you would like to know the results of this survey, please complete the following portion of the survey .

Name: _____

Title: _____

Business address: _____

_____

_____

_____

Thank you for your cooperation in completing this survey. Your response will play an important part in what we hope will be quality bibliographic service to our patrons.

FINDLAY
THE UNIVERSITY OF FINDLAY

Appendix B

Shafer Library

February 2, 1992

Dear Colleague:

As an academic librarian, I am sure that you are interested in offering the best service possible to students, faculty and staff. Efforts to support and enhance the curriculum continue to challenge the academic librarian.

As part of my research project for my master's degree in library science, I have prepared a questionnaire that focuses on a few areas of interest with respect to online/CD-ROM bibliographic database searching. It is a brief survey that should take only about fifteen minutes to complete. Your input is very important, and your responses will remain confidential. Please answer the questions as soon as possible and return the survey in the envelope provided.

If you are interested in the results of this survey, please complete the last item on the questionnaire and you will receive a summary in the mail.

Thank you very much for taking the time to complete the questionnaire. Your participation in this survey is appreciated.

Yours truly,

Lynn Pitet
Periodicals Assistant

1000 North Main Street
Findlay, Ohio 45840-3695
419-422-8313

Appendix C

Respondents by State	n
Indiana	15
Kentucky	5
Michigan	12
Pennsylvania	35
Total	67

Table 1

Who Can Search	%	n
Library staff	100	55
Faculty	100	55
Undergraduates	98	54
Graduate students	69	38
Community members	49	27

Table 2

Charge for Services	%	n
Flat fee	0	0
Connect time costs	34	19
Status of requester	34	19
No fee	30	17

Table 3

Promotion of Services	n
In-library	20
Campus-wide	15
Bibliographic	44
No promotion	5

Table 4

Location of Workstation	%	n
Room by itself	65	36
Secluded in ref.	11	6
Open in ref.	20	11

Table 5

Endnotes

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[32]Donna Cornick, "Being an End-User is not for Everyone," Online (March 1989): 49-54.

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